



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,663	08/10/2001	Richard L. Simmons	56964US002	6518

7590 10/07/2002

Office of Intellectual Property Counsel
3M Innovative Properties Company
PO Box 33427
St. Paul, MN 55133-3427

EXAMINER

PRASAD, CHANDRIKA

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 10/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/927,663	SIMMONS ET AL.
	Examiner	Art Unit
	Chandrika Prasad	2839

-- The MAILING DATE of this communication appears *n*th cov r sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 August 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-25 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 10 August 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- 1) Certified copies of the priority documents have been received.
- 2) Certified copies of the priority documents have been received in Application No. _____.
- 3) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8,9. 6) Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the voids and smoothening by abrasive laden slurry polishing must be shown and identified by reference numerals or the feature(s) canceled from Claims 3 and 6. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The following is a quotation of an appropriate paragraph of 37 CFR 1.75:

(d) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. (See 1.58(a)).

4. Specification is objected under 37 C.F.R. 1.75(d) because of the followings:

- A unitary body has not been described (Claim 1, line 2).
- Voids in the unitary body (Claim 3, line 2) have not been described.
- Smoothening by abrasive laden slurry polishing (Claim 6, lines 1-2) has not been described.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwasaki.

Iwasaki (Figure 5) shows a unitary body 16 with an input end with a plurality of openings, an output end with a plurality of openings and a plurality of passageways connecting a single input opening to a single output opening wherein the input openings and output openings are configured differently from each other. The input end has voids to reduce the amount of material in the unitary body. Figure 5 shows a ruggedized cable attachment with a load-bearing portion at the output end for termination. It is inherent that the unitary body and other components are encased and anchored in a housing (not shown) to provide protection.

7. Claims 14, 17, 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shahid (6,351,590).

Shahid (Figure 3) shows a body having a plurality of plates 70,72, each having an input end, output end and a plurality of channels wherein the plates are stacked together to form a plurality of passageways (tubes) connecting each single opening at input to a single opening at output. The plates have alignment means 106, 108. Shahid discloses the use of injecting molding for making the plates (Column 10, lines 26-31).

8. Claims 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Shahid (6,351,590).

Shahid (Figures 1-2) shows a rigid body 20 having a plurality of hollow tubes (passageways), each tube with an input end and an output end disposed between end plates 42 (shown on one side, the other side not shown) with a plurality of openings wherein the openings at the two ends are configured differently. Shahid discloses the use of flexible tubes to be known in the art and Shahid (Figure 3) shows tubes or passageways made in two halves.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Applicant's admitted prior art (AAPA).

Iwasaki shows all the features of these claims as described in Paragraph 6 above except the material of the unitary body to be a polymer or a metal and the use of

an additive manufacturing process. AAPA (Page 9, lines 13-16) shows the use of polymers or metals for unitary bodies (housings) for optical fiber components to be well known. It would have been obvious to one having ordinary skill in the art at the time of the instant invention to make the Iwasaki's unitary body of polymer or metal as shown by AAPA because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

AAPA (Page 10, lines 3-29) also shows the use of additive manufacturing process to be well known. It would have been obvious to one having ordinary skill in the art at the time of the instant invention to make the Iwasaki unitary body by an additive manufacturing process because this provides a well-known process to make a three-dimensional unitary body.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Chen et al.

Iwasaki shows all the features of this claim as described in Paragraph 6 above except the use of abrasive laden slurry polishing. Chen discloses the use of abrasive laden slurry for polishing optical waveguides (column 2, lines 32-39). It would have been obvious to one having ordinary skill in the art at the time of the instant invention to use abrasive laden slurry for polishing Iwasaki's passageways because this would provide a much smoother surface as taught by Chen.

12. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Shahid (6,351,590).

Iwasaki shows all the features of these claims as described in Paragraph 7 above except the unitary body mounted in a plug-in card to form a rack mounted optical module. The instant invention does not provide any reasons or specific problem to be solved by such an arrangement. Shahid (Figure 3) shows a unitary body connected to a plug-in card 52 to form a rack mounted optical module. It would have been obvious to one having ordinary skill in the art at the time of the instant invention to arrange the Iwasaki's unitary body in a rack mounted optical module as shown by Shahid because this would provide a secured compact mounting for the unitary body.

13. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahid (6,351,590) in view of Engstrand et al.

Shahid shows all the features of these claims as described in Paragraph 7 above except at least one passageway being nonlinear and the channels intersecting on at least one plate. The instant invention does not provide any reasons or specific problem to be solved by such an arrangement. Engstrand (Figures 1-3) shows such an arrangement of passageway and channels on a plate. It would have been obvious to one having ordinary skill in the art at the time of the instant invention to arrange the Shahid's channels and passageway in a configuration as shown by Engstrand because this would provide a shuffling of the passageways if so desired.

14. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shahid (6,351,590) in view of Tanguay, Jr. et al.

Shahid shows all the features of this claim as described in Paragraph 7 above except the use of milling for making channels. Tanguay discloses the use of milling for

making channels 12 in a substrate 14. It would have been obvious to one having ordinary skill in the art at the time of the instant invention to use milling for forming channels in the Shahid's plates because this is a well known process for forming grooves, recesses, channels, etc.

15. Claim 25 is rejected under 35 U.S.C. 102(e) as being anticipated by Shahid (6,351,590) in view of Hutton et al.

Shahid shows all the features of this claim as described in Paragraph 8 above except the use of color-coding. Color-coding is general knowledge. Hutton discloses the use of color-coding for optical fibers. It would have been obvious to one having ordinary skill in the art at the time of the instant invention to color-code the Shahid's tubes because this would provide a means to identify the individual tubes.

Contact Information

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chandrika Prasad at (703) 308-0977. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild, can be reached at (703) 308-2710. The fax number for this Group is (703) 872-9318 (general) and (703) 872-9319 for after-final. Any inquiry of a general nature should be directed to the Group receptionist at (703) 308-1782.


Chandrika Prasad

September 26, 2002